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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/835,532	04/16/2001	Paul A. Kline	2171-013	5414

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EXAMINER

TRIEU, VAN THANH

ART UNIT	PAPER NUMBER
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2636

DATE MAILED: 04/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/835,532

Applicant(s)

KLINE, PAUL A.

Examiner

Van T Trieu

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 March 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 10-14, 16-21, 23-36 and 38-64 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

- 5) ☐ Claim(s) _____ is/are allowed.

- 6) ☒ Claim(s) 10-14, 16-21, 23-36 and 38-61 is/are rejected.

- 7) ☐ Claim(s) _____ is/are objected to.

- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 April 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 12. 6) ☐ Other: _____

DETAILED ACTION

Drawings

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, "the aggregation device is in communication with the point or presence, at least in part, via a wireless link" and "the third modem" and "the fourth modem" and "the data router in communication with the third and the fourth modem" must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Objections

2. (Twice) Claim 44 is objected to because of the following informalities: claim 44 is depended on a canceled claim number 1. Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(g)(1) during the course of an interference conducted under section 135 or section 291, another inventor involved therein establishes, to the extent permitted in section 104, that before such person's invention thereof the invention was made by such other inventor and not abandoned, suppressed, or concealed, or (2) before such person's invention thereof, the invention was made in this country by

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another inventor who had not abandoned, suppressed, or concealed it. In determining priority of invention under this subsection, there shall be considered not only the respective dates of conception and reduction to practice of the invention, but also the reasonable diligence of one who was first to conceive and last to reduce to practice, from a time prior to conception by the other.

3. Claims 10-13, 16-18, 21, 26, 28, 29, 32, 36, 38, 39, 44, 47-50, 52, 53, 57, 58, 62 and 64 are rejected under 35 U.S.C. 102(g) as being anticipated by **Cern** [US 6,452,482].

Regarding claim 10, the claimed aggregation device (the form of data path between the medium voltage power feed point and the data feed point, including backhauler, modem, optical isolator and modem, see Figs. 12 and 14, col. 14, lines 53-67, col. 16, lines 1-17 and col. 22, lines 5-8); and the first transformer (the MV-LV transformers 1102 and 1445, see Figs. 12 and 14, col. 14, lines 53-58 and col. 16, lines 18-23); and the plurality of customer power lines to provide a data path bypassing the first transformer (the network of low voltage power lines fed to homes and business to provide data path bypass the inductive coupler 1102 or transformer 1145, see Figs. 12 and 14, col. 4, lines 45-59, col. 14, lines 53-63 and col. 16, lines 1-23); and the first transformer bypass device comprising a first modem and second modem (the first modem 1202 or 1460 and the second modem 1205 or 1480, see Figs. 12 and 14, col. 14, lines 53-63 and col. 16, lines 1-17); and the data is communicated between the transformer bypass device and the aggregation device via the medium voltage power line (data transmission between the bypass device including backhauler, modem, optical isolator and modems via a medium voltage power line or MV power feed point, see Figs. 12 and 14, col. 14, lines 53-67, col. 16, lines 1-17 and col. 22, lines 5-8).

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Regarding claim 11, all the claimed subject matters are cited in respect to claim 10 above, and including the isolation device (the optical isolators or high frequency isolation transformer 1615, see Fig. 16A, col. 14, lines 65-67 and col. 19, lines 25-28).

Regarding claim 12, all the claimed subject matters are cited in respect to claim 11 above, see Figs. 12 and 14.

Regarding claim 13, all the claimed subject matters are cited in respect to claim 10 above, and including the optical isolators, see Fig. 12, col. 14, lines 53-67.

Regarding claim 16, all the claimed subject matters are cited in respect to claims 10 and 11 above.

Regarding claim 17, all the claimed subject matters are cited in respect to claim 10 above, and including the data router (the data router 1220, see Fig. 12).

Regarding claim 18, all the claimed subject matters are cited in respect to claim 10 above, and including the third modem, which reads upon the data coupling applications such as modem for personal computer and internet use in homes or businesses connected to the second modem 1205 or 1480 via LV load, see Figs. 12 and 14, col. 1, lines 24-26, col. 4, lines 45-52, col. 6, lines 16-19 and col. 9, col. 1-4.

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Regarding claim 21, all the claimed subject matters are cited in respect to claim 10 above, and including the unique address, see col. 20, lines 18-26.

Regarding claim 26, all the claimed subject matters are cited in respect to claim 10 above, and including the Internet data, see col. 1, lines 24-26.

Regarding claim 28, all the claimed subject matters are cited in respect to claims 10 and 18 above, wherein the fourth modem is one or more of personal computer modems and/or telecommunication modems.

Regarding claim 29, the method claimed limitations are met by the apparatus claims 10 above, see Figs. 12 and 14, col. 14, lines 53-63, col. 16, lines 1-23, col. 19, lines 62-67, col. 20, lines 1-4 and col. 21, lines 13-22.

Regarding claim 32, all the claimed subject matters are cited in respect to claims 26 and 29 above.

Regarding claim 36, all the claimed subject matters are cited in respect to claims 10 and 17 above.

Regarding claim 38, all the claimed subject matters are cited in respect to claim 36 above, see Figs. 12 and 14.

Regarding claim 39, all the claimed subject matters are cited in respect to claims 11 and 38 above.

Regarding claim 44, all the claimed subject matters are cited in respect to claim 10 above, see Figs. 12-14.

Regarding claim 47, all the claimed subject matters are cited in respect to claims 10 and 26 above.

Regarding claim 48, all the claimed subject matters are cited in respect to claim 47 above and including the backhaul.

Regarding claim 49, all the claimed subject matters are cited in respect to claims 11 and 49 above, see Fig. 12.

Regarding claim 50, all the claimed subject matters are cited in respect to claims 11 and 49 above, see Fig. 12.

Regarding claim 52, the method claimed limitations are met by the apparatus claim claims 10 and 26 above.

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Regarding claim 53, all the claimed subject matters are cited in respect to claim 52 above.

Regarding claim 57, all the claimed subject matters are cited in respect to claims 18 and 36 above.

Regarding claim 58, all the claimed subject matters are cited in respect to claims 21 and 36 above.

Regarding claim 62, all the claimed subject matters are cited in respect to claims 26 and 36 above.

Regarding claim 64, all the claimed subject matters are cited in respect to claims 28 and 36 above.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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4. Claims 14, 19, 24, 27, 31, 33-35, 54-56, 60 and 63 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Cern** [US 6,452,482] in view of **Brown** [US 6,144,292].

Regarding claim 14, **Cern** fails to disclose the aggregation device is in communication with point of presence, at least in part, via a wireless link. However, **Cern** teaches that the data transmission between the bypass aggregation device including backhauler, modem, optical isolator and modems via a medium voltage power line or MV power feed point, via cables or wires, see Figs. 12 and 14, col. 14, lines 53-67, col. 16, lines 1-17 and col. 22, lines 5-8. **Brown** suggests that a wide range of different transmission techniques for use with electricity medium power line communication each using various modulation methods including frequency FSK, time and code division multiplexing. A large number of standard cordless/wireless CT2, mobile and cellular radio telephone communication techniques is suitable for effecting signal transmission over a conditioned network over the premises or building 48, see Figs. 1-4, col.1, lines 20-27, col. 2, lines 64-67, col. 3, lines 1-35 and col. 9, lines 3-46. Therefore, it would have been obvious to one skill in the art at the time the invention was made to substitute the cordless/wireless telephone link of **Brown** for the cable/wire transmission of **Cern** for reducing and/or eliminating of cables/wires within the premise or building to make easier for installation of power communication lines.

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Regarding claim 19, all the claimed subject matters are discussed between **Cern** and **Brown** in respect to claims 14 and 18 above, wherein the substituted cordless/wireless for use in voice telephone communications.

Regarding claim 27, **Cern** fails to disclose the transformer bypass device communicates video data. However, according to the combination between **Cern** and **Brown** in respect to claims 14 and 18, wherein **Brown** suggests that the mains electricity distribution and/or transmission network is for use of mains electricity networks and/or lines for telecommunications transmission including voice, data, image and/or video, see col. 1, lines 20-26. Therefore, it would have been obvious to one skill in the art at the time the invention was made to modify the electrical power line transmission of **Cern** for use to transmit/receive video data along with message and/or voice data such as of **Brown** in order to increase the capability operation functions of the power line transmissions without any major changing of the transmission lines.

Regarding claim 31, all the claimed subject matters are discussed between **Cern** and **Brown** in respect to claims 19 and 29 above.

Regarding claim 33, all the claimed subject matters are discussed between **Cern** and **Brown** in respect to claims 27 and 29 above.

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Regarding claim 34, all the claimed subject matters are discussed between **Cern** and **Brown** in respect to claims 19 and 29 above.

Regarding claim 35, all the claimed subject matters are discussed between **Cern** and **Brown** in respect to claims 19 and 29 above.

Regarding claim 54, all the claimed subject matters are discussed between **Cern** and **Brown** in respect to claims 10 and 19 above.

Regarding claim 55, all the claimed subject matters are discussed between **Cern** and **Brown** in respect to claims 19 and 54 above.

Regarding claim 56, all the claimed subject matters are discussed between **Cern** and **Brown** in respect to claims 19 and 54 above.

Regarding claim 60, all the claimed subject matters are discussed between **Cern** and **Brown** in respect to claims 19 and 36 above.

Regarding claim 63, all the claimed subject matters are discussed between **Cern** and **Brown** in respect to claims 27 and 36 above.

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5. Claims 23, 30, 45 and 59 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Cern** [US 6,452,482] in view of **Teyssandier et al** [US 5,272,462]. Regarding claim 23, **Cern** fails to disclose data router is configured to prioritize transmission of data received from the communication devices. However, **Cern** silences of the priority in the data router 1220 for providing bi-directional data communications between home and external network, see Fig. 12, col. 14, lines 53-63 and col. 15, lines 14-16. **Teyssandier et al** suggests that a computerized remote transmission device 10 by on-line currents is associated with medium voltage electrical power distribution system MT using the lines of three-phase power system. Each line switch is equipped with an auxiliary means of communication having a slave modulation and demodulation circuit designed to send and receive the address codes signals with an order of priority, see Figs. 1-6, col. 1, lines 46-65, col. 2, lines 26-31 and 56-68, col. 3, lines 20-39. Therefore, it would have been obvious to one skill in the art at the time the invention was made to substitute the auxiliary circuit of **Teyssandier et al** for the data router of **Cern** for automatically controlling of the priority signal being received or transmitted, which enhance of the efficiency and reliability of the power line communications network.

Regarding claim 30, all the claimed subject matters are discussed between **Cern** and **Teyssandier et al** in respect to claims 23 and 29 above.

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Regarding claim 45, all the claimed subject matters are discussed between **Cern** and **Teyssandier et al** in respect to claims 23 and 58 above.

Regarding claim 59, all the claimed subject matters are discussed between **Cern** and **Teyssandier et al** in respect to claims 23 and 44 above.

6. Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Cern** and **Teyssandier et al** and further in view of **Brown** [US 6,144,292]

Regarding claim 24, all the claimed subject matters are discussed between **Cern** and **Teyssandier et al** and **Brown** in respect to claims 18 and 23 above.

7. Claims 20, 33, 40-43, 51 and 61 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Cern** [US 6,452,482] in view of **Binder** [US 6,480,510].

Regarding claim 20, **Cern** fails to disclose the first modem uses Orthogonal Frequency Division Multiplexing. However, **Cern** suggests that the medium voltage transmission lines are used for the bi-directional transmission of high digital data to/from homes and businesses, which including high frequency terminations, see Figs. 12 and 14, col. 4, lines 45-52, col. 6, lines 16-19, col. 11, lines 18-25 and col. 12, lines 42-47. **Binder** suggests that a serial intelligent cells SIC 700-708 are connected by one or more conducting wire pairs 710 of power line for communicating bi-directionally and independently of other communicating pairs in the local area network. The electrical power can be combined with local area network data using frequency domain

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multiplexing, see Figs. 1 and 10, col. 1, lines 49-66, col. 3, lines 60-67, col. 4, lines 1-19 and col. 8, lines 2-14. Therefore, it would have been obvious to one skill in the art at the time the invention was made to substitute the frequency domain multiplexing of **Binder** for the high frequency terminations of **Cern** in order to allow sharing of bandwidth between multiple stations or customers, which will increase the transmission capacity without losing data.

Regarding claim 33, **Cern** fails to disclose the first data package signal comprises video data. However, **Cern** teaches that the transmission data coupling applications such as modem for personal computer and internet use in homes or businesses connected to the second modem 1205 or 1480 via LV load, see Figs. 12 and 14, col. 1, lines 24-26, col. 4, lines 45-52, col. 6, lines 16-19 and col. 9, col. 1-4. **Binder** suggests that a serial intelligent cells SIC 700-708 are connected by one or more conducting wire pairs 710 of power line for communicating bi-directionally and independently of other communicating pairs in the local are network. The SIC network can be used as a computer bus extender and electrically-conducting media such as video frame grabber card 1014 connected to a video camera 1016, see Figs. 1 and 10, col. 2, lines 47-58, col. 3, lines 60-67, col. 4, lines 1-19 and col. 11, lines 38-58. Therefore, it would have been obvious to one skill in the art at the time the invention was made to substitute the video data of **Binder** for use as one of the data coupling applications of **Cern** since the data signals are in digital format, which is well known to encode of the audio, video and/or voice messages for communicating there between.

Regarding claim 40, all the claimed subject matters are discussed between **Cern** and **Binder** in respect to claims 20 and 36 above.

Regarding claim 41, all the claimed subject matters are discussed between **Cern** and **Binder** in respect to claims 20 and 36 above.

Regarding claim 42, all the claimed subject matters are discussed between **Cern** and **Binder** in respect to claims 20 and 36 above.

Regarding claim 43, all the claimed subject matters are discussed between **Cern** and **Binder** in respect to claims 20 and 36 above.

Regarding claim 51, all the claimed subject matters are discussed between **Cern** and **Binder** in respect to claims 20 and 47 above.

Regarding claim 61, all the claimed subject matters are discussed between **Cern** and **Binder** in respect to claims 20 and 36 above.

8. Claims 25 and 46 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Cern** and **Teyssandier et al** and further in view of **Binder** [US 6,144,292]

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Regarding claim 25, all the claimed subject matters are discussed between **Cern** and **Teyssandier et al** and **Binder** in respect to claims 18 and 20 above.

Regarding claim 46, all the claimed subject matters are discussed between **Cern** and **Teyssandier et al** and **Binder** in respect to claims 20 and 45 above.

Response to Arguments

9. Applicant's arguments filed on 26 March 2004 have been fully considered but they are not persuasive. Because,

Applicant's arguments:

(A) Yee does not teach or suggest of the medium voltage power line.

Response to the arguments:

(A) The cited reference of Cern teaching of the medium voltage power line, which is used to make the rejection smoother.

Conclusion

10. Examiner is very regrettably to withdraw of the allowed and objected claims indicated in the First Office Action filed on 02 October 2003, according to the amendment filed on 26 March 2004 and the update search.

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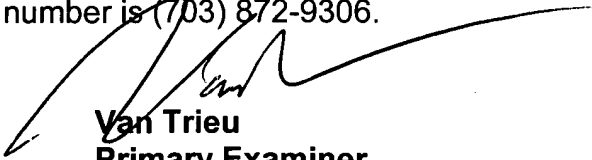
11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

12. Any inquiry concerning this communication or earlier communications from examiner should be directed to primary examiner **Van Trieu** whose telephone number is (703) 308-5220. The examiner can normally be reached on Mon-Fri from 7:00 AM to 3:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. **Jeffery Hofsass** can be reached on (703) 305-4717.

The central office facsimile number is (703) 872-9306.



Van Trieu
Primary Examiner
Date: 4/20/04